SantosHuman Inc. welcomes University of Ontario Institute of Technology to the Santos® University Program

New strategies to reduce injury risk and optimize worker performance are among the anticipated outcomes of a new partnership between a renowned ergonomics researcher at the University of Ontario Institute of Technology in Oshawa, Ontario and Coralville, Iowa-based Santos Human Inc. (SHI)

Dr. Nicholas La Delfa, a newly appointed Assistant Professor with the university's Faculty of Health Sciences will collaborate with the *Santos® Institute* through its **Santos® University Program** on several educational and research initiatives.

"*I want students to understand the power of digital human modelling and how these approaches can be applied to areas such as ergonomics and human factors. We can influence important design decisions that optimize worker performance and reduce the risk for musculoskeletal injuries.*", says La Delfa who goes on to say, "*This will provide University of Ontario Institute of Technology students with a competitive advantage, as they will develop a comprehensive theoretical backing and the practical technological skills necessary to stand out to future employers.*"

Dr. La Delfa will incorporate Santos® technologies into existing undergraduate Occupational Ergonomics and Clinical Biomechanics courses at the university and develop a senior-level Advanced Human Modelling and Proactive Ergonomics course. The senior course will employ Santos® technologies to showcase how human biomechanics, physiology and movement behaviour can be represented mathematically. "*Given the technological curriculum focus at the university, coupled with my particular research expertise, this relationship with SantosHuman is extremely exciting. This partnership will lead to further advancements in our ability to assess musculoskeletal injury risk, using cutting-edge proactive ergonomics methods*", said La Delfa.

The University of Ontario Institute of Technology is a leader in the use and implementation of industry-specific software solutions within curriculum to create technology-enriched learning environments. This student exposure to program-based software is beneficial in today's competitive job market. The

Faculty of Health Sciences integrates advanced technologies, learning methodologies and research in an inter-professional environment to inspire students committed to health, inquiry and social responsibility.

"It is exciting and gratifying that such high caliber universities and faculty are partnering with SHI to expand the use of digital human modelling tools within their curriculum and that these activities will also expand related research", said Steve Beck, SHI's President and CEO.

Dr. La Delfa's research focuses on the reduction of work-related musculoskeletal disorders through enhanced knowledge of human capability, function and performance, emphasizing advanced methods that proactively assess injury risk. He integrates research findings within state-of-the art digital human modelling and proactive work simulation processes, as he did with his doctoral dissertation validating the Arm Force Field (AFF) method for Manual Arm Strength Prediction (with advisor Professor Emeritus Dr. Jim Potvin of McMaster University). Both worked with SHI developers to incorporate the AFF method as a Santos® Plug-In which is now available with two company products.

"SHI welcomes the opportunity to help push forward education within the field of human systems integration, as well as work with UOIT on new DHM applications and R&D efforts", said Dr. Tim Marler, SHI's Chief Research Officer and Director of the **Santos® Institute**.

La Delfa will continue basic neuromechanics research leading to eventual improvements in the AFF method, as well as the generation of other novel proactive ergonomics approaches.

Related links
- Dr. Nicholas La Delfa's programs, publications and current research projects
- University of Ontario Institute of Technology home page
- University's Faculty of Health Sciences home page

SHI's success is tied directly to our clients' success and the **Santos® Institute** and its programs represent just a few ways in which we strive to match state of the art, human-centric, virtual product design and analysis methods, technologies, and resources with industry requirements.

Provided through the *Santos® Institute*, the **Santos® University Program** is designed to complement and/or foster projects, courses, and curricula related to:

- Industrial Design
- Computer science
- Digital Human Modeling
- Simulation
- Engineering
- Occupational Health & Safety

- Ergonomics
- Human Factors
- Objective Analysis of Motion Capture
- Biomechanics
- Robotics (the foundation of the Santos® predictive models)

In addition, the *Santos® Institute* can assist in the development of new and related curricula.

Contact the *Santos® Institute* at institute@santoshumaninc.com to participate in the Santos® University Program.